

MERCED RIVER CORRIDOR  
RESTORATION PLAN

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**RESUMES**  
SCIENTIFIC ADVISORY TEAM

**William Eric Dietrich — Vita**

*Education:*

B.A., Occidental College, 1972  
M.S., University of Washington, 1975  
Ph.D., University of Washington, 1982

*Present Position:*

Professor, University of California, Berkeley, Department of Geology and Geophysics

*Experience:*

Summer intern, Water Resources Technical Division, Washington, State Department of Ecology, 1974  
Research Assistant, University of Washington, 1978-1981  
Assistant Professor, University of California, Berkeley, 1981-1986  
Associate Professor, University of California, Berkeley, 1986-1990  
Occasional consultant on hydrology, fluvial and hillslope geomorphology

*Academic Responsibilities:*

Graduate Advisor, 1982-1985; 1990-1992  
Undergraduate Advisor, 1986-1988; 1989-1990  
Member of Group in Soil Science, 1983-1991  
Affiliated Faculty of Energy and Resources Group, 1989-

*Professional Societies:*

American Geophysical Union  
British Geomorphological Research Group  
Japanese Geomorphological Union  
Geological Society of America  
American Geomorphological Field Group

*Professional Responsibilities:*

Member, American Geophysical Union Hydrology Section Unsaturated Zone Committee, 1984-1992  
and Erosion and Sedimentation Committee, 1984-  
Chairman, Erosion and Sedimentation Committee of the American Geophysical Union Hydrology  
Section, 1988-1990  
Member, Editorial Board, *Geology*, 1986-1988; 1990-1993  
Member, National Science Foundation sponsored Japan-U.S. Cooperative Science Program on  
Mechanics of River Meanders, 1985-1987  
Member, the Commission on Measurement, Theory and Application in Geomorphology, International  
Geographical Union, 1984-1988  
Member, the Erosion Studies Scientific Advisory Committee of the California Department of Forestry  
and Fire Protection, 1986  
Member, Editorial Board, *Catena*, 1986-1992  
Editorial Board, Annual Reviews of Earth and Planetary Sciences 1992-1996  
Deputy Editor, Water Resources Research, 1993-1996

*Honors:*

National Science Foundation, Presidential Young Investigator, 1985-1990  
Gordon Warwick Award, British Geomorphological Research Group, 1986  
Fellow, American Geophysical Union, 1992  
Fellow, Geological Society of America, 1992  
Wiley Award for paper published in *Earth Surface Processes and Landforms* in 1991 (with Steve  
Reneau) (given by the British Geomorphological Research Group)  
Crosby Lecturer, MIT, 1994  
Horton Award, American Geophysical Union, 1995

### William E. Dietrich — Publications

1. Dietrich, W.E., 1975, Surface water resources of San Juan County, *in*, Geology and Water Resources of the San Juans, R.H. Russel (ed.), Water Supply Bulletin No. 46, Washington Department of Ecology, p. 59-125.
2. Dietrich, W.E. and T. Dunne, 1978, Sediment budget for a small catchment in mountainous terrain: *Zeit. für Geomorph.*, Suppl. Bd. 29, p. 191-206.
3. Dunne, T., W.E. Dietrich and M. Brunengo, 1978, Recent and past erosion rates in semi-arid Kenya: *Zeit. für Geomorph.*, Suppl. Bd. 29, p. 130-140.
4. Dunne, T., W.E. Dietrich and M. Brunengo, 1979, Rapid evaluation of soil erosion and soil lifespan in the grazing lands of Kenya: *Proc. Internatl. Assoc. Hydrol. Sci.*, Canberra Symposium on the Hydrology of Areas of Low Precipitation, p. 421-428.
5. Dietrich, W.E., J.D. Smith and T. Dunne, 1979, Flow and sediment transport in a sand bedded meander: *Jour. of Geol.*, v. 87, p. 305-315.
6. Dunne, T., W.E. Dietrich and M. Brunengo, 1980, Simple, portable equipment for erosion experiments under artificial rainfall: *Jour. Agric. Engineer. Res.*, v. 25, p. 1-8.
7. Dunne, T. and W.E. Dietrich, 1980, Experimental study of Horton overland flow on tropical hillslopes: I. Soil condition, infiltration and frequency of runoff: *Zeit. für Geomorph.*, Suppl. Bd. 35, p. 40-59.
8. Dunne, T. and W.E. Dietrich, 1980, Experimental study of Horton overland flow on tropical hillslopes: II. Hydraulic characteristics and hillslope hydrographs: *Zeit. für Geomorph.*, Suppl. Bd. 35, p. 60-80.
9. Dunne, T., W.E. Dietrich, N. Humphrey and D. Tubbs, 1981, Geologic and geomorphic aspects of gravel supply in western Washington, *in*, *Proc. on Salmon-spawning Gravels*, J.J. Cassidy (ed.), Wash. State Water Res. Center, Report No. 39, p. 75-100.
10. Dietrich, W.E., T. Dunne, N.F. Humphrey and L.M. Reid, 1982, Construction of sediment budgets for drainage basins: *in* *Sediment Budgets and Routing in Forested Drainage Basins*, F.J. Swanson, R.J. Janda, T. Dunne, and D.N. Swanston (eds.), U.S.D.A. Forest Service General Technical Report PNW-141, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon, p. 5-23.
11. Dunne, T. and W.E. Dietrich, 1982, Sediment sources in tropical catchments: *Proc. Soil Erosion and Conservation in the Tropics*, Amer. Soc. of Agronomy Symp., Colorado State University, August 1979, Spec. Publ., no. 43, p. 41-55.
12. Dietrich, W.E., 1982, Settling velocity of natural particles: *Water Resources Research*, v. 18, no. 6, p. 1615-1626.
13. Dietrich, W.E., 1982, Mechanics of a river meander: *in*, *Field Trip Guidebook 1982* Conference of the American Geomorphological Field Group, Pinedale, Wyoming, L.B. Leopold (ed.), p. 18-29.
14. Dietrich, W.E., D. Windsor and T. Dunne, 1982, Geology, climate, and hydrology of Barro Colorado Island: *in*, *Seasonal Rhythms and the Ecology of a Tropical Forest: Seasonal Rhythms and Long-term Changes*, E.G. Leigh, Jr., A.S. Rand and D.M. Windsor (eds.), Smithsonian Institution Press, Washington, D.C., p. 21-46.
15. Dietrich, W.E. and J.D. Smith, 1983, Influence of the point bar on flow through curved channels, *Water Resources Research* v. 19, no. 5, p. 1173-1192.
16. Dietrich, W.E. and R. Dorn, 1984, Significance of thick deposits of colluvium on hillslopes: a case study involving the use of pollen analysis in the coastal mountains of Northern California, *Jour. Geol.*, v. 92, p. 147-158.
17. Dietrich, W.E. and J.D. Smith, 1984, Processes controlling the equilibrium bed morphology in river meanders, *in*: *Rivers '83: Proceedings of a Specialty*

- Conference on River Meandering, October, 1983; Am. Soc. Civ. Engineers, p. 759-769.
18. Dietrich, W.E., J.D. Smith, and T. Dunne, 1984, Boundary shear stress, sediment transport and bed morphology in a sand-bedded river meander during high and low flow, in: *Rivers '83: Proceedings of a Specialty Conference on River Meandering*, October, 1983; Am. Soc. Civ. Engineers, p. 632-639.
  19. Dietrich, W.E. and J.D. Smith, 1984, Bedload transport in a river meander, member, p. 1355-1380.
  20. Reneau, S.L., W.E. Dietrich, C.J. Wilson, and J.D. Rogers, 1984, Colluvial deposits and associated landslides in the northern S.F. Bay Area, California, USA, *Proceedings IV International Symposium on Landslides*, Toronto, 1984, pp. 425-430.
  21. Dietrich, W.E. and J. Gallinatti, 1991, Fluvial geomorphology, in: *Field Experiments and Measurement Programs in Geomorphology*, O. Slaymaker (ed.), A.A. Balkema, Rotterdam, p. 169-229.
  22. Dietrich, W.E., C.J. Wilson and S.L. Reneau, 1986, Hollows, colluvium and landslides in soil-mantled landscapes, in: *Hillslope Processes, Sixteenth Annual Geomorphology Symposium*, A. Abrahams (ed.), Allen and Unwin, Ltd., p. 361-388.
  23. Higgins, C.G., D.R. Coates, V.R. Baker, W.E. Dietrich, T. Dunne, E.A. Keller, R.M. Norris, G.G. Parker Sr., M. Pavich, T.L. Péwé, J.M. Robb, J.D. Rogers, and C.E. Sloan, 1988, Landform development, Chapter 42 in *The Geology of North America, v. O-2, Hydrogeology*, Geological Society of America, p. 383-400.
  24. Reneau, S.L., W.E. Dietrich, R.I. Dorn, C.R. Berger, and M. Rubin, 1986, Geomorphic and paleoclimatic implications of latest Pleistocene radiocarbon dates from colluvium-mantled hollows, California, *Geology*, v. 14, p. 655-658.
  25. Reneau, S.L. and W.E. Dietrich, 1987, The importance of hollows in debris flow studies, in: *Debris Flows/Avalanches: Process, Recognition and Mitigation, Reviews in Engineering Geology, Volume VII*, J.E. Costa and G.F. Wieczorek (eds.), Geological Society of America, p. 165-180.
  26. Brimhall, G.H. and W.E. Dietrich, 1987, Constitutive mass balance relations between chemical composition, volume, density, porosity, and strain in metasomatic hydrochemical systems: Results on weathering and pedogenesis, *Geochimica et Cosmochimica Acta*, v. 51, no. 3, p. 567-587.
  27. Dietrich, W.E., 1987, Mechanics of flow and sediment transport in river bends, in: *River Channels: Environment and Process*, K.S. Richards (ed.), Institute of British Geographers Special Publication No. 18, Basil Blackwell, Inc., p. 179-227.
  28. Reneau, S.L. and W.E. Dietrich, 1987, Size and location of colluvial landslides in a steep forested landscape, *Proc. Int. Symp. on Erosion and Sedimentation in the Pacific Rim, 3-7 August 1987, Corvallis, Ore., Int. Assoc. Hydrological Sciences Bull., Pub. no. 165*, p. 39-48.
  29. Wilson, C.J. and W.E. Dietrich, 1987, The contribution of bedrock groundwater flow to storm runoff and high pore pressure development in hollows, *Proc. Int. Symp. on Erosion and Sedimentation in the Pacific Rim, 3-7 August 1987, Corvallis, Ore., Int. Assoc. Hydrological Sciences Bull., Pub. no. 165*, p. 49-59.
  30. Dietrich, W.E., S.L. Reneau and C.J. Wilson, 1987, Overview: "Zero-order basins" and problems of drainage density, sediment transport and hillslope morphology, *Proc. Int. Symp. on Erosion and Sedimentation in the Pacific Rim, 3-7 August 1987, Corvallis, Ore., Int. Assoc. Hydrological Sciences Bull., Pub. no. 165*, p. 27-37.

31. Whiting, P.J., W.E. Dietrich, L.B. Leopold, T.G. Drake, and R.L. Shreve, 1988, Bedload sheets in heterogeneous sediment, *Geology*, v. 16, p. 105-108.
32. Drake, T.G., R.L. Shreve, W.E. Dietrich, P.J. Whiting, and L.B. Leopold, 1988, Bedload transport of fine gravel observed by motion-picture photography, *Journal of Fluid Mechanics*, v. 192, p. 193-217.
33. Brimhall, G.H., C.J. Lewis, J.J. Ague W.E. Dietrich, J. Hampel, T. Teague, and P. Rix, 1988, Metal enrichment in bauxite by deposition of chemically-mature eolian dust, *Nature*, v. 333, p. 819-824.
34. Reneau, S.L., W.E. Dietrich, M. Rubin, D.J. Donahue, and J.T. Jull, 1989, Analysis of hillslope erosion rates using dated colluvial deposits, *Journal of Geology*, v. 97, p. 45-63.
35. Dietrich, W.E. and P.J. Whiting, 1989, Boundary shear stress and sediment transport in river meanders of sand and gravel, in S. Ikeda and G. Parker (Eds.), *River Meandering*, American Geophysical Union Water Resources Monograph 12, p. 1-50.
36. Montgomery, D.R., and W.E. Dietrich, Where do channels begin?, 1988, *Nature*, v. 336, p. 232-234.
37. Montgomery, D., and W.E. Dietrich, 1989, Channel initiation, drainage density and slope, *Water Resources Research*, v. 25, no. 8, p. 1907-1918.
38. Dietrich, W.E., J.W. Kirchner, H. Ikeda, and F. Iseya, 1989, Sediment supply and the development of the coarse surface layer in gravel-bedded rivers, *Nature*, v. 340, no. 6230, p. 215-217.
39. Wilson, C.J., Dietrich, W.E. and T.N. Narasimhan, 1989, Predicting high pore pressures and saturation overland flow in unchannelled hillslope valleys, *Hydrology and Water Resources Symposium*, Institution of Engineering Australia, p.392-396.
40. Reneau, S.L. and W.E. Dietrich, 1990, Depositional history of hollows on steep hillslopes, coastal Oregon and Washington, *National Geographic Research*, v. 6, no. 2, p. 220-230.
41. Kirchner, J., W.E. Dietrich, F. Iseya, and H. Ikeda, 1990, The variability of critical boundary shear stress, friction angle, and grain protrusion in water-worked sediments, *Sedimentology*, v. 37, p. 647-672.
42. Reneau, S.L., W.E. Dietrich, D.J. Donahue, and A.J.T. Jull, 1990, Late Quaternary history of colluvial deposition and erosion in hollows, Central California Coast Ranges, *Geological Society of America Bulletin*, v. 102, no. 7, p. 969-982.
43. Dietrich, W.E., 1989, Slope morphology and erosion processes, in C. Wahrhaftig and D. Sloan (Eds.), *Geology of San Francisco and Vicinity*, Field Trip Guidebook T105, American Geophysical Union, p. 38-40.
44. Wilson, C. J., S. L. Reneau, and W. E. Dietrich, 1989, Hydrologic and erosional processes in hollows, Lone Tree Creek, Marin County, California, in W. M. Brown, III, (ed.), *Landslides in Central California*, Field Trip Guidebook T381, American Geophysical Union, p. 75-90.
45. Dietrich, W. E. and T. Dunne, 1993, The channel head, in K. Beven and M. J. Kirkby (Eds.), *Channel Network Hydrology*, J. Wiley and Sons, p. 175-219.
46. Whiting, P. J., and W. E. Dietrich, 1991 Convective accelerations and boundary shear stress over a channel bar, *Water Resources. Research*, v. 27, no.5, p.783-796.
47. Whiting, P. J., and W. E. Dietrich, 1990, Boundary shear stress and roughness over mobile alluvial beds, *Am. Soc. Civ. Eng., J. Hydraul. Eng.*, V.116 (12), p.1495-1511.
48. Reneau, S.L. and W.E. Dietrich, 1991, Erosion rates in the southern Oregon Coast Range: evidence for an equilibrium between hillslope erosion and sediment yield, *Earth Surface Processes and Landforms*, vol. 16, p.307-322.

49. Buffington, J.L., W.E. Dietrich and J. Kirchner, 1992, Friction angle measurements on a naturally formed gravel streambed: implications for critical boundary shear stress, *Water Resources Research*, Vol. 28, No.2, p.411-425.
50. Montgomery, D.R. and W.E. Dietrich, 1992, Channel initiation and the problem of landscape scale, *Science*, V.255, p.826-830.
51. Brimhall, G. H, Chadwick, O.A., Lewis, C.J., Compston, W., Dietrich, W.E., Power, M.E., Hendricks, D. and Bratt, J., 1992, Deformational mass transport and invasive processes in soil evolution, *Science* V. 255, p.695-702.
52. Dietrich, W.E., C.J. Wilson, D.R. Montgomery, J. McKean, and R. Bauer, 1992, Erosion thresholds and land surface morphology, *Geology*, v. 20, p. 675-679.
53. Monaghan, M.C., J. McKean, W.E. Dietrich and J. Klein, 1992,  $^{10}\text{Be}$  Chronometry of bedrock-to-soil conversion rates, *Earth Planet. Sci. Lett.*, v. 111, p. 483-492.
54. Seidl, M.A. and W.E. Dietrich, 1992, The problem of channel erosion into bedrock, in K.H. Schmidt and J. de Ploey (Editors), *Functional geomorphology: landform analysis and models*, *Catena Supplement* 23, p. 101-124.
55. Dietrich, W.E., C.J. Wilson, D.R. Montgomery, and J. McKean, 1993, Analysis of erosion thresholds, channel networks and landscape morphology using a digital terrain model, *J. Geology*, Vol. 101, No.2, p.161-180.
56. McKean, J. A., W.E. Dietrich, R.C Finkel, J.R. Southon, and M.W. Caffee, 1993, Quantification of soil production and downslope creep rates from cosmogenic  $^{10}\text{Be}$  accumulations on a hillslope profile, *Geology*, v.21, p. 343-346.
57. Whiting, P. J. and W.E. Dietrich, 1993, Experimental constraints on bar migration through bends: implications for meander wavelength selection, *Water Resources Research*, vol. 29, no. 4, p.1091-1102.
58. Montgomery, D. R. and W.E. Dietrich, 1994, A physically-based model for topographic control on shallow landsliding, *Water Resources Research*, vol.30,no.4, p.1153-1171..
59. Booker, F.A., W.E. Dietrich and L.M. Collins, 1993, Runoff and erosion after the Oakland Firestorm: expectations and observations, *California Geology*, volume 46, number 6, p.159-173.
60. Whiting, P.J. and W.E. Dietrich, 1993, Experimental studies of bed topography and flow patterns in large-amplitude meanders: 1. Observations, *Water Resources Research*, vol. 29, no.11, p. 3605-3614.
61. Whiting, P.J. and W.E. Dietrich, 1993, Experimental studies of bed topography and flow patterns in large-amplitude meanders: 2. Mechanisms, *Water Resources Research*, vol 29, no.11, p.3615-3622.
62. Day, G.M., W.E. Dietrich, S.C. Apte, G.E. Batley, and A. J. Markham, 1993, The fate of mine-derived sediments deposited on the middle Fly River flood-plain of Papua New Guinea, in R. J. Allan and J.O. Nriagu (Editors), *International Conference on Heavy Metals in the Environment*, Volume 1, CEP Consultants, Ltd., Edinburgh, UK, p. 423-426.
63. Montgomery, D.R. and W.E. Dietrich, 1994, Landscape dissection and drainage area-slope thresholds, in *Process Models and Theoretical Geomorphology*, edited by M.J. Kirkby, John Wiley and Sons, p.221-246.
64. Howard, A.D., W. E. Dietrich, and M.A. Seidl, 1994, Modeling fluvial erosion on regional to continental scales, *Journ. of Geophysical Res.*, vol. 99, No. B7, 13,971-13,986.
65. Seidl, M. A., Dietrich, W. E., Kirchner, J. W., 1994, Longitudinal profile development into bedrock: an analysis of Hawaiian channels, *J. Geology*, v. 102, p. 457-474.
66. Dietrich, W.E., Reiss, R., Hsu, M., and Montgomery, D.R., 1995, A process-based model for colluvial soil depth and shallow landsliding using digital elevation data, *Hydrological Processes*, Vol. 9, 383-400.

- 67 Montgomery, D.R. and W.E. Dietrich, 1995, Hydrologic processes in a low-gradient source area, *Water Resources Research*, v. 31, no. 1, p. 1-10.
68. Power, M.E., A. Sun, G. Parker, W.E. Dietrich and J. T. Wootton, 1995, Hydraulic food-chain models, *Bioscience*, v. 45, No.3, p.159-167.
69. Ligon, F. K., W. E. Dietrich, and W. J. Trush, 1995, Downstream ecological effects of dams: a geomorphic perspective, *Bioscience*, Vol. 45, No. 3, p. 183-192.
70. Power, M.E., G. Parker, W.E. Dietrich, and A. Sun, 1995, How does floodplain width affect floodplain river ecology? A preliminary exploration using simulations, *Geomorphology*, v.13, p.310-318.
- 71 Rinaldo, A., Dietrich, W.E., Rigon, R., Vogel, G. K., Rodriguez-Iturbe, I., 1995, Geomorphological signatures of climate, *Nature*, v. 374, p. 632-635.
72. Prosser, I.P., and W.E. Dietrich, 1995, Field experiments on erosion by overland flow and their implication for a digital terrain model for channel initiation, *Water Resources Research*, vol. 31, no. 11, p. 2867-2876.
73. Prosser, I. P., W. E. Dietrich, and J. Steveson, 1995, Flow resistance and sediment transport by concentrated overland flow in a grassland valley, *Geomorphology*, v.13, p. 71-86
74. Power, M. E., W. E. Dietrich, and K. O. Sullivan, in press, Experiment, observation and inference in river and watershed investigations, in Reserits, W.J. and J. Berando, Editor, *Issues and perspectives in experimental ecology*, Oxford University Press
- 75 Dietrich, W.E., G. Day and G. Parker, in press, The Fly River, Papua New Guinea: inferences about river dynamics, floodplain sedimentation and fate of sediment, in A. Miller and A. Gupta (ed), *Varieties of Fluvial Form*, J. Wiley.
76. Anderson, S. A. , W. E. Dietrich, R. Torres, D.R. Montgomery and K. M. Loague ,1997, Concentration-discharge relationships in runoff from a steep, unchanneled catchment, *Water Resources Research*, vol. 33, no. 1, p. 211-225.
77. Power, M. E., W. E. Dietrich, and J. C. Finlay, in press, Dams and downstream aquatic biodiversity: potential food web consequences of hydrologic and geomorphic change, *Environmental Management*.
78. Montgomery, D.R., W. E. Dietrich, R. Torres, S. P. Anderson and J. T. Heffner, 1997, Hydrologic response of a steep unchanneled valley to natural and applied rainfall, *Water Resources Research*, vol. 33, no.1, p. 91-109.
79. Montgomery, D. R. W. E. Dietrich and K. Sullivan, in press, The role of GIS in watershed Analysis
80. Dietrich, W. E. and D. R. Montgomery, in press, Hillslopes, Channels and landscape Scale, In G. Sposito (ed) *Scale dependence and Scale Invariance in Hydrology*, Cambridge University Press.
81. MacDonald, L.H., D. M. Anderson,, and W. E. Dietrich, in press, Paradise Threatened: Land use and erosion on St. John, U.S. Virgin Islands, *Environmental Management*.
82. Heimsath, A. H., W. E. Dietrich, K. Nishiizumi, and R. C. Finkel, 1997, The soil production function and landscape equilibrium, *Nature* - July 24 issue.

**Richard R. Harris**

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***Education:***

B.S., University of California, Berkeley, 1974 (Forest Resource Management)

M.L.A., University of California, Berkeley, 1976 (Landscape Architecture)

Ph.D., University of California, Berkeley, 1985 (Wildland Resource Science)

***Experience:***

Associate Cooperative Extension Forestry Specialist (Forestry Program Leader), University of California, Berkeley, Department of Environmental Science, Policy and Management, 1991-present

Associate Cooperative Extension Forestry Advisor, University of California Cooperative Extension, Humboldt/Del Norte Counties, 1988-1991

Independent Consulting Ecologist, 1987-1988

Post Doctoral Research Ecologist, Oregon State University, Department of Forest Science, Corvallis, 1986-1987

Assistant Professor of Land Use, University of Wisconsin, Department of Plant and Earth Science, River Falls, 1984-1986

Vice President and Manager of Northern California Operations, LSA Inc., Consulting Environmental Planners, Berkeley, CA, 1977-1984

Lecturer, University of California, Departments of Conservation and Resource Studies and Landscape Architecture, Berkeley, 1977-1979, 1983-1984

Planner, County of Marin, CA and City of Novato, CA, 1973-1977

***Recent Professional Highlights:***

President-elect, Watershed Management Council; 1997

Development and presentation of workshops on forest monitoring, forest management and stewardship; development of life-long learning curriculum; Forest Stewardship Program, State of California; 1996-present

Development of basic curriculum for ecosystem science and management, tailored for natural resource workers on Indian Reservations; content of the curriculum blends traditional American Indian ecological knowledge with western scientific knowledge; 1995

Development and testing of a multi-scale, quantitative decision analysis procedure for selecting sites for riparian restoration; funded by U.S. Environmental Protection Agency, Wetlands Research Program; 1991-1994

Chair, Watershed Management Council Symposium on Watershed Restoration, Ashland, OR; 1994

Manager, Hoopa Valley Tribal Forestry Program (under cooperative agreement between the Hoopa Valley Tribe and the University of California); 1993

Member, California Board of Forestry team preparing a Habitat Conservation Plan for the northern spotted owl on private lands in California; 1991-1992



## **RICHARD R. HARRIS**

### **PUBLICATIONS (1985-PRESENT)**

- CODES:**
- A** Refereed Research Articles
  - B** Book Chapters and Reviews
  - C** Non-refereed Research Articles
  - D** Abstracts for Oral Presentations and Posters
  - E** Books
  - F** Popular and Miscellaneous

**F 1.** 1985 Harris, R.R. 1985. Relationships between vegetation and fluvial geomorphology at Cottonwood Creek, California. Ph.D. Dissertation, Department of Forestry and Resource Management, University of California, Berkeley, CA. 329 p.

**A 2.** 1985 Harris, R.R., R.J. Risser and C.A. Fox. 1985. A method for evaluating streamflow discharge-plant species occurrence patterns of headwater streams. p. 97-90. In: *Riparian Ecosystems and their Management; Reconciling Conflicting Uses*. Proceedings of the First North American Riparian Conference, 16-18 April, 1985, Tucson, AZ. USDA-Forest Service Gen. Tech. Rep. RM-120.

**D 3.** 1985 Risser, R.J. and R.R. Harris. 1985. Mitigation for impacts to riparian vegetation on regulated headwater streams. Paper presented at Third International Symposium on Regulated Streams. 4-8 August, 1985, University of Alberta, Edmonton, Alberta, Canada.

**A 4.** 1986 Harris, R. R. 1986. Occurrence patterns of riparian plants and their significance to water resource development. *Biological Conservation* 38:273-286.

**D 5.** 1987 Harris, R.R. and J.E. Means. 1987. Productivity and growth of Douglas-fir stands in an Oregon Cascades stream valley. Paper presented at 1987 Annual Meeting, Oregon Society of American Foresters and Oregon Chapter of the Wildlife Society, 20-22 May, 1987, Ashland, OR.

**A 6.** 1987 Harris, R.R. 1987. Impacts of hydroelectric development on montane riparian forests of California. pp. 21-30 In: T. Fujimori and M. Kimura (eds.). *Human impacts and management of mountain forests*. Forestry and Forest Products Research Institute, Ibaraki, Japan.

**A 7.** 1987 Harris, R.R., Fox, C.A. and R.J. Risser. 1987. Impacts of hydroelectric development on riparian vegetation in the Sierra Nevada region, California, USA. *Environmental Management* 11:519-527.

**A 8.** 1987 Harris, R.R. 1987. Occurrence of vegetation on geomorphic surfaces in the active floodplain of a California alluvial stream. *American Midland Naturalist* 118:393-405.

**A 9.** 1988 Harris, R.R. 1988. Associations between stream valley geomorphology and riparian vegetation as a basis for landscape analysis in the eastern Sierra Nevada, California, USA. *Environmental Management* 12:219-228.

**F 10.** 1989 Harris, R.R. 1989. Summary of the workshop on assessing cumulative impacts of timber operations. 30 January-3 February, 1989, Fort Bragg, CA. University of California Cooperative Extension. Eureka, CA. 13 pp.+ app.

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F 11.1989 Harris, R.R. (ed.). 1989. Harvesting trees while retaining our fish: a challenge we can meet. Proceedings of the fifteenth annual conference of the Humboldt Chapter, American Fisheries Society, Scotia, CA 22 April, 1989. University of California Cooperative Extension, Eureka, CA. 14 pp.+ app.

A 12.1989 Harris, R.R. 1989. Riparian communities of the Sierra Nevada, CA and their environmental relationships. p. 393-399. In: Proceedings of the California Riparian Systems Conference: Protection, Management and Restoration for the 1990s. Davis, CA. 22-24 September, 1988. USDA-Forest Service Gen. Tech. Rep. PSW 110.

B 13.1990 Risser, R.J. and R.R. Harris. 1990. Mitigating impacts to riparian vegetation on western montane streams. Chapter 9 In: J.A. Gore (ed.). Alternatives in regulated flow management. CRC Press, Inc., Boca Raton, FLA.

D 14.1990 Harris, R.R., G. Nakamura, G. Blomstrom, P. Abbott, J. Biondini and R. Vigil. 1990. Status report: integrated resource management planning on the Hoopa Valley Reservation, CA. p. 239-260. In: Proceedings of the 14th Annual National Indian Timber Symposium. Cherokee, NC. 3-6 April 1990. Intertribal Timber Council, Vancouver, WA.

D 15.1991 Harris, R.R. 1991. Integrated resource management on the Hoopa Valley Indian Reservation: a case study in collaboration and self-determination. Poster presented at the Society of American Foresters National Convention. San Francisco, CA. 4-7 August, 1991.

C 16.1991 Harris, R.R. 1991. Hoopa Valley Indian Reservation timber inventory analysis. Report to the Hoopa Valley Tribal Council. Dept. of Forestry and Resource Management. University of California, Berkeley. 48 p.+ app.

F 17.1991 Harris, R.R. 1988-91. North coast forest echoes. Quarterly newsletter of the Extension Forestry Program, Humboldt-Del Norte Counties. Vol. 1-3.

F 18.1992 Harris, R.R. 1991-92. North coast biodiversity news. Quarterly newsletter of the Extension Forestry Program. Dept. of Forestry and Resource Management. University of California, Berkeley. Issues 1-9.

E 19.1992 Harris, R.R. and D.E. Erman (Technical Coordinators) and H.M. Kerner (Editor). 1992. Proceedings of symposium on biodiversity of northwestern California, October 28-30, 1991, Santa Rosa, CA University of California, Wildland Resources Center Report No. 29, Berkeley, CA. 316 p.

F 20.1992 Tuazon, R., J. DePree, J. Gaffin, R.R. Harris, R. Johnson, G. Murray, L. Roush, W. Whitlock and R. Zwanziger. 1992. Northern spotted owl habitat conservation plan for private forestlands in California. Report to California Board of Forestry, Sacramento, CA. 61 p. + app.

C 21.1994 Harris, R.R. 1994. Documentation of the use of best professional judgment in selecting sites for riparian wetlands restoration: a case study in the San Luis Rey watershed. Final Report to US Environmental Protection Agency, Research Cooperative Agreement CR 819510-01-0. 29 p. + app.

D 22.1994 Harris, R.R. 1994. Selecting stream reaches for evaluation of riparian restoration potential. Paper presented at 15th Annual Meeting, Society of Wetland Scientists, May 30-June 3, 1994, Portland, OR.

Richard R. Harris

C 23.1994 LeBlanc, J. and R.R. Harris. 1994. Selecting sites for riparian restoration: summary of the process developed under cooperative agreement between the University of California and US Environmental Protection Agency. Final Report to US Environmental Protection Agency, Cooperative Agreement CR 819510-01-0. 12 p.

C 24.1994 Harris, R.R., L. Huntsinger, S. McCaffrey and P. Hopkinson. 1994. Use of geographical information systems versus manual techniques for map analysis in riparian restoration projects: a comparison. Final Report to US Environmental Protection Agency, Research Cooperative Agreement CR 819510-01-0. 26 p. + app.

F 25.1994 Harris, R.R. 1994. Sustainable forestry in Mexico. Natural Resources News 2 (1):1,3,8.

F 26.1994 Harris, R.R., and L. Huntsinger. 1994. Lessons on stewardship from the past and present. Natural Resources News 2 (2):1,3-4.

C 27.1994 Harris, R.R. 1994. Strategies for protecting, enhancing and restoring the riparian communities of the Noguera Ribagorçana natural area, Catalonia, Spain. Published by the Department of the Environment, Natural Heritage Program, Government of Catalonia, Barcelona, Spain. 25 p. + maps (in Catalan).

F 28.1994 Harris, R.R. and F. Giro. 1994. A land without wild rivers: comments on a trip to the Catalan region of Spain. Published by the Department of the Environment, Natural Heritage Program, Government of Catalonia, Barcelona, Spain. 9 p (in Catalan).

C 29.1994 Harris, R.R. 1994. Riparian restoration in the context of conservation planning at the watershed scale. Paper presented at a Workshop on Riparian Restoration in the Upper Arkansas Basin, US Environmental Protection Agency, Denver, CO. 10 p.

F 30.1994 Harris, R.R. 1994. Silvicultura sostenible en Mexico. Foro Forestal 1 (2):8 (in Spanish).

A 31.1995 Harris, R.R., Blomstrom, G. and G. Nakamura. 1995. Tribal self-governance and forest management at the Hoopa Valley Indian Reservation, Humboldt County, CA. American Indian Culture and Research Journal 19:1-38.

A 32.1995 Harris, R.R. 1995. Drainage basin analysis and conservation planning for riparian vegetation. P. 27-36 IN: Harris, R.R., R. Kattelmann, H. Kerner and J. Woled (editors). 1995. Watersheds '94 Respect, Rethink and Restore, Proceedings of the Fifth Biennial Watershed Management Conference, Ashland, OR, 16-18 November, 1994 University of California, Water Resources Center Report No. 86, Davis, CA.

E 33.1995 Harris, R.R., R. Kattelmann, H. Kerner and J. Woled (editors). 1995. Watersheds '94 Respect, Rethink and Restore, Proceedings of the Fifth Biennial Watershed Management Conference, Ashland, OR, 16-18 November, 1994, University of California, Water Resources Center Report No. 86, Davis, CA. 150 p.

E 34.1995 Harris, R.R. 1995. Ecosystems and Indian people: a curriculum on ecosystem science and management for Indian people working in natural resource management. Volume 1: Syllabus and Lecture Notes. Department of Environmental Science, Policy, and Management, Cooperative Extension Forestry, University of California, Berkeley. 160 p.

Richard R. Harris

- E 35.1995 Harris, R.R. (editor) 1995. Ecosystems and Indian people: a curriculum on ecosystem science and management for Indian people working in natural resource management. Volume 2: Assigned Readings. Department of Environmental Science, Policy, and Management, Cooperative Extension Forestry, University of California, Berkeley. 667 p.
- D 36.1995 Harris, R.R. and C. Olson. 1995. Multiscale planning for riparian restoration on streams of the western US. Paper presented at Annual Conference, Society for Ecological Restoration, 14-16 September, 1995, Seattle, WA.
- D 37.1995 Harris, R.R. 1995. An ecosystem science curriculum for Indian natural resource workers. Paper presented at the Eleventh Annual California Indian Conference, 6-8 October, 1995, University of California, Los Angeles, CA.
- D 38.1995 Nakamura, G.M. and R.R. Harris. 1995. Natural resource inventory of Indian-owned public domain allotments in California. Paper presented at the Eleventh Annual California Indian Conference, 6-8 October, 1995, University of California, Los Angeles CA.
- A 39. 1995 Harris, R.R. 1996. Forest management in a resource-dependent American Indian community. P. 97-111 IN: Sokolow, A.D. (ed.). 1996. Community and university: case studies and commentary on University of California Cooperative Extension interventions. California Communities Program, University of California, Davis, CA; University of California Division of Agricultural and Natural Resources Publication 3371.
- A 40. Means, J.E., R.R. Harris, T.E. Sabin and C.N. McCain. 1996. Spatial variation in productivity of Douglas-fir stands on a valley floor in the western Cascades range, Oregon. *Northwest Science* 70:201-211.
- A 41. Harris, R.R., P. Hopkinson, S. McCaffrey and L. Huntsinger. 1997. Use of geographical information systems versus manual techniques for map analysis in riparian restoration projects: a comparison. *Journal of Soil and Water Conservation* 52:140-145.
- D 42. Harris, R.R., J. Martin and E. Sam. 1997. Tribal visions: the Navajo Nation forest management plan. Paper presented at the 21st Annual Intertribal Timber Symposium, 2-6 June, 1997, Menominee Nation, Keshena, WI.
- A 43. Olson, C. and R.R. Harris. In press. Applying a two-stage system to prioritize riparian restoration at the San Luis Rey River, San Diego County, California. *Restoration Ecology*.
- A 44. Harris, R.R. and C. Olson. In press. Two-stage system for prioritizing riparian restoration at the stream reach and community scales. *Restoration Ecology*.
- A 45. Harris, R.R. In press. No wild rivers. *Wild Earth*
- A 46. Harris, R.R. and R. Cox. In press. Curriculum on ecology and natural resource management for Indian natural resource workers. *American Indian Culture and Research Journal* 21(3).
- A 47. Nakamura, G.M. and R.R. Harris. In press. Natural resource inventory of Indian-owned public domain allotments in California. *American Indian Culture and Research Journal* 21(3).

**Richard R. Harris**

**F 48. Harris, R.R., T.E. Lisle and R. Ziemer (compilers). In press. Aftermath of the 1997 flood: summary of a workshop. USDA-Forest Service, Watershed Analysis Center, 8-9 April, 1997, McKinleyville, CA. Watershed Management Council Networker 7(2):**

**A 49. Harris, R.R. and C. Olson. Submitted. Vegetation analysis for riparian community restoration. Biological Conservation.**

**A 50. Harris, R.R., Nakamura, G.M. and G. Blomstrom. Submitted. Computerized forest planning in Indian Country: the Hoopa Valley case study. Journal of Forestry.**

## Curriculum Vitae

**G. MATHIAS KONDOLF**  
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*kondolf@ced.berkeley.edu*

### EDUCATION

THE JOHNS HOPKINS UNIVERSITY - PhD, Geography and Environmental Engineering 1988.

UNIVERSITY OF CALIFORNIA AT SANTA CRUZ - MS, Earth Sciences 1982

PRINCETON UNIVERSITY - AB *cum laude*, Geology 1978.

### PROFESSIONAL EXPERIENCE

#### UNIVERSITY OF CALIFORNIA AT BERKELEY

*Associate Professor of Environmental Planning, 1994 to present, and Associate Professor of Geography, 1996-present. Assistant Professor of Environmental Planning, 1988-1994. Courses: Environmental Geology for Planners, Hydrology for Planners, Restoration of Rivers and Streams, Ecological Analysis in Urban Design, Introduction to Environmental Sciences.*

#### WHITE MOUNTAIN RESEARCH STATION

*Research Scientist, 1989-1993 (33% appointment).*

#### OAK RIDGE NATIONAL LABORATORY

*Graduate Research Participant, Environmental Sciences Division, 1985-1987.*

#### US GEOLOGICAL SURVEY

*Hydrologic Field Assistant, 1985.*

#### THE JOHNS HOPKINS UNIVERSITY

*Teaching Assistant in Geomorphology, 1984.*

#### UNIVERSITY OF CALIFORNIA AT SANTA CRUZ

*Teaching Assistant in Environmental Geology, 1979; Geomorphology, 1980, 1981; and Alternative Energy and Appropriate Technology, 1980; Research Assistant in EPA-supported hydrologic studies, 1980.*

#### PRINCETON UNIVERSITY

*Research Assistant in NSF-supported study developed oceanographic laboratory exercises, 1978-1979.*

### PROFESSIONAL AFFILIATIONS

*American Fisheries Society*

*American Geophysical Union*

*American Water Resources Association*

*Council of Educators in Landscape Architecture*

*International Association for Scientific Hydrology*

*Watershed Management Council*

### AWARDS AND FELLOWSHIPS

*Pacific Gas and Electric Company-UC Wildlands Research Center,*

*"Award for Excellence in Wildlands Research, 1993. (for studies on Trinity River)"*

*Oak Ridge Associated Universities, Graduate Research  
Participation Fellowship, 1985-1986; 1986-1987.  
The Johns Hopkins University Fellowship, 1982-1983.  
Middle Atlantic Division, American Assn. of Geographers,  
"Outstanding Graduate Student of the Year," 1983.  
Sigma Xi, elected to membership, June 1978.  
New Jersey Assn. of Broadcasters, First place in Public Affairs  
1979 for radio documentary, "Einstein, the Man Behind the Mind," co-produced with Judi Muller, WHWH,  
Princeton, N.J.*

***SERVICE AS PEER-REVIEWER***

*National Science Foundation  
Foundation for Research, Science, and Technology, New Zealand  
Council of Educators in Landscape Architecture  
University of California Press  
California Water Resources Center  
Utah Water Resources Center  
Aquatic Conservation  
Biological Conservation  
Canadian Journal of Fisheries and Aquatic Sciences  
Conservation Biology  
Environmental Management  
Journal of Hydraulic Engineering  
North American Journal of Fisheries Management  
Water Resources Research*

## FUNDED RESEARCH PROJECTS AT UNIVERSITY OF CALIFORNIA

*Assessment of Geomorphic and Sediment-Related Issues in Jamison Creek, Plumas-Eureka State Park.* (\$24,000 study funded by the California Department of Parks and Recreation, 1988-1990)

*Management of Coarse Sediment in Regulated Rivers.* (\$35,000 study funded by University of California Water Resources Center, 1989-1991)

*Development of Debris Management Plan for General Creek, Sugar Pine Point State Park.* (\$8,000 study funded by the California Department of Parks and Recreation, 1989-1990)

*Initial studies - Upper Truckee River Marsh Wildlife Enhancement and SEZ (Stream Environment Zone) Restoration.* (responsible for hydrologic and geomorphic aspects of \$150,000 study funded by the California Tahoe Conservancy, 1989-1991)

*Empirically-Verified Flushing Flow Recommendations for the Trinity River below Lewiston Dam.* (\$87,000 study funded by the US Fish and Wildlife Service, 1991-1994)

*Evaluation of Impacts of a Hydroelectric Project on the Riparian, Aquatic, and Recreational Resources of the North Fork Stanislaus River within Calaveras-Big Trees State Park.* (\$48,000 study funded by the California Department of Parks and Recreation, 1990-1992)

*Debris Flow Hazards along the Paparoa Range Front, West Coast, South Island, New Zealand.* (\$10,000 study funded by the University of California at Berkeley Faculty Senate Committee on Research, 1990-1991)

*Analysis of Sedimentation in Hat Creek Wild Trout Reach.* (\$40,000 study funded by the California Department of Fish and Game, 1991-1993)

*Hydrological and Geomorphologic Investigations on Coyote Creek, Anza Borrego Desert State Park.* (\$25,000 study funded by the California Department of Parks and Recreation, 1992-1993)

*Hydrological and Geomorphologic Analysis for Restoration Design, Jamison Creek, Plumas-Eureka State Park.* (\$65,000 study funded by the California Department of Parks and Recreation, 1993-1994)

*Assessment of restoration success and restoration potential in floodplain gravel pits.* (\$37,000 study funded by California Water Resources Center, 1994-1996)



### **UNIVERSITY COMMITTEE SERVICE**

Chancellor's Advisory Committee on Strawberry Creek, University of California, Berkeley. Chair, 1990-present.

Environmental Health and Safety Policy Committee, University of California, Berkeley. Ex-Officio Member, 1993-present.

Campus Environmental Coordinating Group. Member, 1992-1994.

Environmental Sciences Advisory Committee, University of California, Berkeley. Member, 1994-present.

Environmental Council, University of California, Berkeley. Member of Executive Committee, 1994-present.

Energy and Resources Group, University of California, Berkeley. Affiliated faculty, 1993 to present. Member Executive Committee, 1994-1996.

White Mountain Research Station Advisory Committee, member, 1995-present.

### **OTHER COMMITTEE SERVICE**

Scott's Creek Technical Advisory Committee, Lake County Planning Department, Lakeport, California. Member, 1994-1995.

Trinity River Fisheries Restoration Technical Advisory Committee, US Fish and Wildlife Service, Weaverville, California, member 1995-present.

Los Vaqueros Watershed Technical Advisory Committee, Contra Costa Water District, member 1996.

## CONSULTANCIES

- 1980-1983. Monterey Peninsula Water Management District, Monterey, California. Conducted studies of historical channel changes and downstream changes in baseflow in the Carmel River; designed and implemented data collection program in surface water hydrology, suspended and bedload sediment transport in Carmel River and seven tributaries.
1983. Office of Surface Mining, US Department of Interior. Mapped alluvial valley floors in Powder River Basin of Montana and Wyoming. (Subconsultant to Earth Resources Associates, Helena, Montana)
- 1986-1988. California Department of Fish and Game. Conducted analysis of historical channel stability and of spawning gravels on the Lower Yuba River. (Subconsultant to Philip Williams and Associates, San Francisco, and Beak Consultants, Sacramento)
1986. Oak Ridge National Laboratory, Oak Ridge, Tennessee. Conducted hydrologic and sediment-related studies on the Merced River for FERC Environmental Impact Study of El Portal hydroelectric project.
1986. Oroville-Wyandotte Irrigation District, California. Conducted studies of sediment-related problems on the South Fork Feather River and Slate Creek. (Subconsultant to EBASCO Environmental, Sacramento)
- 1986-1989. Yuba County Water Agency, Marysville, California. Conducted studies on characteristics and downstream transport of sediment sluiced from Our House Dam, Middle Yuba River. (Subconsultant to EBASCO Environmental, Sacramento)
- 1987-1991. California Department of Fish and Game. Conducted hydrologic, historical, channel stability, and spawning gravel analyses on Rush and Lee Vining Creeks, Mono County, and Battle Creek, Lassen County.
1988. Government of West Germany, GTZ (German Technical Cooperation Unit, Frankfurt). Developed terms of reference for environmental impact assessment of major water storage project on Nile River, under consideration for funding and construction by the Government of West Germany. (Subconsultant to Dr. Ing Peter Geldner, Karlsruhe)
- 1989-1990. California Department of Justice, Office of the Attorney General, Sacramento. Provided expert testimony regarding probable impacts of proposed instream gravel mine on Cottonwood Creek and provided expert testimony on coastal changes along the southern shore of Lake Tahoe.
- 1989-1990. Monterey Peninsula Water Management District, Monterey, California. Analyzed probable effects of reservoir alternatives on downstream channel geometry.
- 1990-1991. California State Water Resources Control Board. Provided evaluation of hydrologic issues relating to riparian vegetation management and enhancement in the Mono Basin for development of an EIR on water rights allocation in the basin. (Subconsultant to Jones and Stokes, Inc., Sacramento)
- 1990-1992. California Department of Transportation, Division of Structures. Conducted geomorphic analysis of channel processes and channel change on Stony Creek, Glenn County, to determine causes of bridge scour and for evaluation of countermeasures. (Subconsultant to San Diego State University Foundation)
1991. District Attorney, County of Monterey, California. Analyzed probable residence time in Wildcat Creek, Big Sur, for sediment eroded from illegal road.
- 1992-1993. California Department of Water Resources, Reclamation Board. Analyzed channel changes in the Sacramento River between Deer Creek and Stony Creek, provided geomorphic input into selection of solutions for repair of fish screens at intake structure for Glenn-Colusa Irrigation District. (Subconsultant to

HDR Engineering, El Dorado Hills, California)

- 1992-1993. Department of Planning, County of Humboldt, California. Provided guidance regarding evaluation of geomorphic and environmental impacts of instream aggregate extraction in the Mad and Eel Rivers and development of a comprehensive management plan.
- 1993. Oak Ridge National Laboratory, Oak Ridge, Tennessee. Conducted hydrologic, vegetative, and sediment-related studies on the Lower Mokelumne River for FERC Environmental Impact Study of Camanche Dam hydroelectric project.
- 1993-1994. California Department of Fish and Game, Sacramento. Provided expert testimony concerning flushing flow requirements for Rush Creek, Mono County, before the State Water Resources Control Board.
- 1994. Dun & Martinek, Eureka, California. Provided third-party review of technical documents concerning sediment transport, channel change, and management of gravel mining in the Russian River, Sonoma County.
- 1994-1995. Department of Planning, County of Yolo, California. Conducted geomorphic and historical channel analyses, provided guidance on management of instream and off-channel mining. (Subconsultant to Northwest Hydraulic Consultants, West Sacramento, California)
- 1994-1995. Oak Ridge National Laboratory, Oak Ridge, Tennessee. Evaluated geomorphic issues relevant to spawning gravels on the Lower Tuolumne River, California.
- 1995. California Environmental Law Project, San Francisco. Evaluated flood control project proposed for Murietta Creek, Riverside County, California. (with W.V.G Matthews)
- 1995. Monterey Peninsula Water Management District. Reviewed geomorphic and hydrologic analysis conducted for proposed wetland mitigation site at San Clemente Reservoir, Carmel River.
- 1996. Placer County Water Agency, Foresthill, California. Provided geomorphic analysis of flushing sediments released from South Fork Long Canyon Dam.
- 1996. Bureau of Land Management, Coeur d'Alene, Idaho. Provided reconnaissance-level geomorphic assessment and guidance for planning restoration projects on Pine Creek.

## PEER-REVIEWED PUBLICATIONS

- Kondolf, G.M., and W.V.G. Matthews. 1986. Transport of tracer gravels on a coastal California river. *Journal of Hydrology*, 85:265-280.
- Kondolf, G.M., and R.R. Curry. 1986. Channel erosion along the Carmel River, Monterey County, California. *Earth Surface Processes and Landforms*, 11:307-319.
- Kondolf, G.M., L.M. Maloney and J.G. Williams. 1987. Effect of bank storage, and well pumping on base flow, Carmel River, California. *Journal of Hydrology*, 91:351-369.
- Kondolf, G.M., G.F. Cada and M.J. Sale. 1987. Assessment of flushing flow requirements for brown trout spawning gravels in steep streams. *Water Resources Bulletin*, 23:927-935.
- Kondolf, G.M., J.W. Webb, M.J. Sale and T. Felando. 1987. Basic hydrologic studies for assessing impacts of flow diversions on riparian vegetation: examples from streams of the eastern Sierra Nevada, California. *Environmental Management*, 11:757-769.
- Swanson, M.L., G.M. Kondolf and P.J. Boison. 1989. An example of rapid gully initiation and extension by subsurface soil erosion: coastal San Mateo County, California. *Geomorphology*, 2:393-403.
- Kondolf, G.M., S.S. Cook, H.R. Maddux and W.R. Persons. 1989. Spawning gravels of rainbow trout in the Grand Canyon, Arizona. *Journal of the Arizona-Nevada Academy of Science*, 23:19-28.
- Keller, E.A., and G.M. Kondolf. 1990. Groundwater and fluvial processes: selected observations. *Geological Society of America Special Paper*, 252:319-340.
- Kondolf, G.M. 1990. Case history: Bank erosion from water table drawdown, coastal California. in Keller, E.A. and G.M. Kondolf. 1990. Groundwater and fluvial processes: selected observations. *Geological Society of America Special Paper*, 252:334-338.
- Kondolf, G.M., G.F. Cada, M.J. Sale and T. Felando. 1991. Distribution of potential salmonid spawning gravels in steep, boulder-bed streams of the eastern Sierra Nevada. *Transactions of the American Fisheries Society*, 120:177-186.
- Kondolf, G.M., and W.V.G. Matthews. 1991. Unmeasured residuals in sediment budgets: a cautionary note. *Water Resources Research*, 27:2483-2486.
- Kondolf, G.M., and S. Li. 1992. The pebble count technique for quantifying surface bed material size in instream flow studies. *Rivers*, 3:80-87.
- Charbonneau, R., and G.M. Kondolf. 1993. Land use change in California: Nonpoint source water quality impacts. *Environmental Management*, 17:453-460.
- Kondolf, G.M., and M.G. Wolman. 1993. The sizes of salmonid spawning gravels. *Water Resources Research*, 29:2275-2285.
- Kondolf, G.M., M.J. Sale and M.G. Wolman. 1993. Modification of gravel size by spawning salmonids. *Water Resources Research*, 29:2265-2274.
- Kondolf, G.M., and Swanson, M.L. 1993. Channel adjustments to reservoir construction and instream gravel mining, Stony Creek, California. *Environmental Geology and Water Science*, 21:256-269.

- Kondolf, G.M. 1993. The reclamation concept in regulation of gravel mining in California. *Journal of Environmental Planning and Management*, 36:397-409.
- Kondolf, G.M., and P. Vorster. 1993. Changing water balance over time in Rush Creek, eastern California, 1860-1992. *Water Resources Bulletin*, 29:823-832.
- Kondolf, G.M. 1993. Lag in stream channel adjustment to livestock exclosure in the White Mountains of California. *Restoration Ecology*, 1:226-230.
- Kondolf, G.M. 1994. Livestock grazing and habitat for a threatened species: land-use decisions under scientific uncertainty in the White Mountains of California. *Environmental Management*, 18(4):501-509.
- Kondolf, G.M. 1994. Geomorphic and environmental effects of instream gravel mining. *Landscape and Urban Planning*. 28:225-243.
- Kondolf, G.M. 1994. Environmental planning in the regulation and management of instream gravel mining in California. *Landscape and Urban Planning*. 29:185-199.
- Kondolf, G.M., and E.M. Micheli. 1995. Evaluating stream restoration projects. *Environmental Management*. 19:1-15.
- Kondolf, G.M. 1995. Five elements for effective evaluation of stream restoration. *Restoration Ecology*. 3(2):133-136.
- Kondolf, G.M., and M. Larson. 1995. Historical channel analysis and its application to riparian and aquatic habitat restoration. *Aquatic Conservation*. 5:109-126.
- Kondolf, G.M. 1995. Geomorphological stream channel classification in aquatic habitat restoration: uses and limitations. *Aquatic Conservation*. 5:127-141.
- Kondolf, G.M. 1995. Managing bedload sediments in regulated rivers: examples from California, USA. *Geophysical Monograph*. 89:165-176.
- Kondolf, G.M.. 1995. Discussion: Use of pebble counts to evaluate fine sediment increase in stream channels by John P. Potyondy and Terry Hardy, *Water Resources Bulletin*. 31(3):537-538.
- Kondolf, G.M. 1996. A cross section of stream channel restoration. *Journal of Soil and Water Conservation*. March-April 1996:119-125.
- Kondolf, G.M. Environmental effects of aggregate extraction from river channels and floodplains. in *Aggregate Resources: A Global Perspective*, P. Bobrowsky (ed.) (in press)
- Castleberry, D.T., J.J. Czech, D.C. Erman, D. Hankin, M. Healey, G.M. Kondolf, M. Mangel, M. Mohr, P.B. Moyle, J. Nielsen, T.P. Speed, and J.G. Williams. 1996. Uncertainty and instream flow standards. *Fisheries*. 21(8):20-21.
- Kondolf, G.M., and P.R. Wilcock. 1996. The flushing flow problem: defining and evaluating objectives. *Water Resources Research*. 32(8):2589-2599.
- Kondolf, G.M. Large-scale extraction of alluvial deposits from rivers in California: geomorphic effects and regulatory strategies. in *Proceedings of the Fourth International Workshop on Gravel Bed Rivers*, P. Klingeman, ed. (in press)

- Wilcock, P.R., G.M. Kondolf, W.V. Matthews, and A.F. Barta. 1996. Specification of sediment maintenance flows for a large gravel-bed river. *Water Resources Research*. 32(9):2911-2921.
- Wilcock, P.R., A.F. Barta, C.C. Shea, G.M. Kondolf, W.V. Matthews, and J. Pitlick. 1996. Observations of flow and sediment entrainment on a large gravel-bed river. *Water Resources Research*. 32(9):2897-2909.
- Kondolf, G.M., R. Kattelman, M. Embury, and D.C. Erman. 1996. Status of riparian habitat. Chapter 36 in *Sierra Nevada Ecosystem Project: Final Report to Congress*, Vol. II, Assessments and scientific basis for management options. Report No. 88, Centers for Water and Wildland Resources, University of California, Davis, p.36-1 - 36-22.
- Kondolf, G.M., J.C. Vick, and T.M. Ramirez. 1996. Salmon spawning habitat rehabilitation on the Merced River, California: an evaluation of project planning and performance. *Transactions of the American Fisheries Society*. 125:899-912.
- Kondolf, G.M. 1997. Application of the pebble count: reflections on purpose, method, and variants. *Journal of the American Water Resources Association (formerly Water Resources Bulletin)*. 33(1):79-87.
- Kondolf, G.M. 1997. Hungry water: effects of dams and gravel mining on river channels. *Environmental Management*. 21: (in press)
- Kondolf, G.M. Lessons learned from river restoration projects in California. *Aquatic Conservation*. (in review)

**Mary Eleanor Power**

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University of California  
Berkeley, CA 94720  
(510) 643-7776  
mepower@garnet.berkeley.edu  
Social Security Number: 026 42 2356

**Education**

B.A., Brown University (Biology), Providence, Rhode Island, 1971  
M.S., Boston University Marine Program (Biology), Woods Hole, Massachusetts, 1974  
PhD., University of Washington (Zoology), Seattle, Washington, Dec. 1981  
"The grazing ecology of armored catfish in a Panamanian stream"

**Professional Experience**

Visiting Assistant Professor, Division of Entomology and Parasitology, University of California, Berkeley, 1986-1987  
Assistant Professor, Department of Zoology, and Integrative Biology, University of California, Berkeley, 1987-1992  
Associate Professor, Department of Integrative Biology, University of California, Berkeley, 1992 - 1996  
Professor, Department of Integrative Biology, University of California, Berkeley, 1996 - present  
  
Faculty Manager, Angelo Coast Range Reserve, 1989 - present  
Chair, Aquatic Ecology Section, Ecological Society of America, 1995-1996  
Chair, University-Wide Natural Reserve System Advisory Committee, 1995-1998

**Honors and Awards**

Sigma Xi, 1971  
Phi Beta Kappa, 1971  
B.A., magna cum laude 1971  
Summer student fellowships, Woods Hole Oceanographic Inst., 1972, 1973  
Nobel summer fellowship, Smithsonian Tropical Res. Inst., 1976  
Walter Rathbone Bacon Fellowship for Field Biology, Smithsonian Institution, 1978-80  
National Science Foundation Dissertation Improvement award 1978-80 (\$3300)  
National Science Foundation award (Ecology panel), 1983-85: "Multi-level effects of an algae-grazing minnow (*Camptostoma anomalum*) on north temperate streams (with Drs. W.J. Matthews and A.J. Stewart, Univ. Oklahoma (\$60,000)  
National Science Foundation supplementary award (Ecology panel), 1983-85: "Predators and algae-grazing minnows in north temperate streams: Does the kind of predator matter?" (with Drs. Matthews, Stewart, and R. Cashner) (\$10,848)  
Jasper Loftus-Hills Prize for Young Investigators, from the American Society of Naturalists, 1985  
National Science Foundation Visiting Professorship for Women, 1986-1988: "The role of primary consumers in structuring communities of northern Californian streams (\$145,265)  
Junior Faculty Award, University of California, Berkeley, 1988  
Water Resources Center (California) Award: 1988-90: "Seasonal and hydrologic controls of algal blooms in northern California rivers." (\$52,600)

National Science Foundation award (Ecology panel), 1991-1993: "Productivity, plant biomass, and trophic interactions in rivers." (\$192,097)

National Science Foundation award (Conservation Biology panel), 1991-1993: "Food web analysis of biodiversity: Application to algal-based river systems." (\$100,000)

National Science Foundation award (Ecology panel) (1994-1996): "Disturbance and the structure of river food webs" (with J.T. Wootton and M.S. Parker, \$300,000)

Water Resources Center (California) Award: 1993-1995. Effects of stream flow regulation and reduction of scouring floods on trophic transfer of biomass to fish in northern California rivers. (\$37,220)

Fulbright Scholar 1994-1995

### **Teaching Interests**

Community ecology, grazing, fish biology, freshwater ecology, food webs



## Publications

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## **Curriculum Vitae**

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Education: BSc(Hons) Melbourne 1965, PhD DipEd Monash 1969

### **Appointments:**

- 1965-69 Tutor, Senior Tutor and Lecturer  
Department of Mathematics, Monash University
- 1969-73 Lecturer, Department of Probability and  
Statistics, University of Sheffield
- 1974-75 Associate Professor, Department of Mathematics  
University of Western Australia
- 1975-82 Professor, Department of Mathematics  
University of Western Australia  
(Head of Department 1980-82)
- 1983-87 Chief, Division of Mathematics and Statistics  
Commonwealth Scientific and Industrial Research  
Organization (Australia)
- 1987- Professor, Department of Statistics,  
University of California, Berkeley  
(Chair, 1989-93)
- 1996- Adjunct Professor, School of Mathematical Sciences,  
Australian National University

**Membership of Professional Bodies:**

Australian Mathematical Society  
Statistical Society of Australia  
Royal Statistical Society  
American Statistical Association (Fellow)  
Institute of Mathematical Statistics (Fellow)  
Biometric Society  
International Statistical Institute (Member)  
Genetics Society of America  
American Society of Human Genetics  
Society of Molecular Biology and Evolution  
American Association for the Advancement of Science (Fellow)

**Current/Previous Memberships:**

Australian Statistics Advisory Council (1983-87)  
Board of Management, Australian Institute of  
Criminology (1983-87)  
Board of Directors, SIROMATH Pty Ltd (1983-87)  
Genome Study Section, National Institutes of Health (1995-1998)

**Recent offices held in professional bodies:**

Western Northern American Region of Biometrics Society President-  
Elect (1991-92); President (1992-3); Past President (1993-4)  
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**Editorial responsibilities:**

Associate Editor: Annals of Statistics (1986-1992); Journal of the  
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#### **Manuscripts Submitted**

1. Comparing DNA-DNA hybridization curves by rates of decay (with R. Guerra) *Molecular Biology and Evolution*.
2. A decision problem in physical mapping (with B. Yu and D.O. Nelson)
3. Modelling crossover interference using the Poisson skip model (with H. Zhao and K Lange).
4. An algorithm for haplotype analysis (with Shili Lin).